Remarks

Claims 1-7, 9-11 and 13 remain in the application. Claims 8 and 12 are hereby canceled without prejudice. Claims 1, 9, 11 and 13 are hereby amended. No new matter has been added.

Claim Rejections -- 35 U.S.C. 102

Original claims 1-13 were rejected under 35 U.S.C. 102 as being anticipated by Bare (US Patent No. 6,947,384). Applicant hereby traverses this rejection in relation to the claims as now amended.

As explained on page 6, lines 10-14, of the present application, "Unlike a normal set of switches, a mesh could have different paths for the addresses learnt from the same switch. To aid in field and in-house debugging, a mesh traceroute protocol is hereby presented that allows a user to quickly determine the path that a packet would take given a destination MAC address and VID."

Claim 1 as amended now recites as follows:

1   .A method of automated path tracing from an original mesh switch
     through a switching mesh to a specified destination, the method
     comprising:
         building a mesh traceroute packet to the specified destination;
         transmitting the mesh traceroute packet via an exit port associated
             with the specified destination; and
         receiving the mesh traceroute packet as returned,
         **wherein the mesh traceroute packet as returned includes a
         plurality of <u>hop entries</u> providing a <u>path trace</u> from the
         original mesh switch through the switching mesh to the
         specified destination, each hop entry including a hop
         media access (MAC) address, a hop in-port, and a hop
         out-port**.

(Emphasis added.)

Independent claim 1 as amended now explicitly states that "**the mesh traceroute packet as returned includes a plurality of <u>hop entries</u> providing**

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a <u>path trace</u> **from the original mesh switch through the switching mesh to the specified destination**." (Emphasis added.) Hence, claim 1 is now explicitly limited to a technique where a **path trace** is provided in an automated manner using a traceroute packet which is returned with a sequence of **hop entries**.

As further recited in claim 1,"**each hop entry including a hop media access (MAC) address, a hop in-port, and a hop out-port.**" (Emphasis added). The hop MAC address, hop in-port, and hop out-port for each of the sequence of hops are utilized to provide **a trace of a single specific path from the original mesh switch through the switching mesh to the specified destination**.

In contrast to the claimed invention, the citation to Bare pertains to a protocol where a switch <u>periodically transmits a cost packet</u> out of all of its up ports. The information in the cost packet is <u>used by all the switches to update their cost information</u>. This is explained in detail in Bare on column 27, lines 35-67, which is reproduced below for convenience of reference.

3.3. Cost Propagation

As soon as a switch has determined that a load balance link exists on a port and has successfully negotiated a loop detection bit offset, **it will send out a switch cost packet. The purpose of this packet is to propagate switch cost information throughout the load balance domain.** This packet also serves as the loop detection mechanism.

After the link has initially come up, it will start an update timer. Use of one timer per switch, irrespective of VLANs, makes implementation easier. When this timer expires, the switch will again send a switch cost packet out all up ports. **This packet is passed from switch to switch, with the cost and hop count incremented along the way.** This information is used by all the switches to update all the paths to a given edge switch. Later, when host addresses are associated with a given edge switch, the possible paths for these packets will already be in place. Not until the first cost packet has converged will non load balance links be allowed to receive and send normal traffic. This initial wait period is somewhat like the listening and learning phase of the spanning-tree protocol.

Sending the switch cost packet out periodically has the following benefits:

1. It prevents excessive update traffic. If the updates were sent out whenever costs changed, a network with large fluctuations might generate a large number of cost packets. These packets themselves could then create even more fluctuations.

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2. The amount of update traffic overhead is predictable and can be controlled by the cost transmission interval.

3. Network debugging is easier since paths will not change faster than the update interval.

4. It adds robustness to the protocol since updates will always propagate to all switches whether costs have changed or not. Thus, if some switch lost the information or was not updated before, it will be when the packet is sent next.

(Emphasis added.)

Hence, the cited disclosure in Bare pertains to a protocol where cost information is periodically broadcast by each mesh switch to keep all the switches in the mesh updated. As such, the cost packet of Bare includes cost and hop count fields which are incremented as the cost packet is passed from switch to switch. However, the cost packet of Bare does not include the claimed hop MAC address, hop in-port, nor hop out-port.

Thus, applicants respectfully submit that the cost packet for cost propagation per the protocol disclosed in Bare is fundamentally different from the traceroute packet protocol per the claimed invention. Applicants respectfully submit that claim 1 now overcomes this rejection.

Claims 2-7 depend from claim 1. Therefore, applicants respectfully submit that claims 2-7 also overcome this rejection for at least the same reasons discussed above in relation to claim 1.

Claim 9 is amended to put it in independent form and is also amended similarly as claim 1 is amended. Therefore, applicants respectfully submit that claim 9 now also overcomes this rejection for at least the same reasons discussed above in relation to claim 1.

Claim 10 depends from claim 9. Therefore, applicants respectfully submit that claim 10 also overcomes this rejection for at least the same reasons discussed above in relation to claim 9.

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Claim 11 is also amended similarly as claim 1 is amended. Therefore, applicants respectfully submit that claim 11 now also overcomes this rejection for at least the same reasons discussed above in relation to claim 1.

Claim 13 depends from claim 11. Therefore, applicants respectfully submit that claim 13 also overcomes this rejection for at least the same reasons discussed above in relation to claim 11.
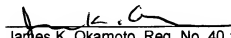
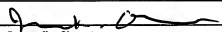<div align="center">Conclusion</div>

For the above-discussed reasons, applicant believes that the pending claims, as hereby amended, are now patentably distinguished over the cited art. Favorable action is respectfully requested.

If for any reason an insufficient fee has been paid, the Commissioner is hereby authorized to charge the insufficiency to Deposit Account No. 08-2025.

Respectfully Submitted,

Dated: July 24, 2007

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CERTIFICATE OF MAILING

I hereby certify that this correspondence, including the enclosures identified herein, is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below. If the Express Mail Mailing Number is filled in below, then this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service pursuant to 37 CFR 1.10.

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